



U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICE

**INFORMATION DISCLOSURE  
STATEMENT**

Docket Number  
10020/30901

Application Number  
10/729,547

Filing Date  
December 5, 2003

Examiner  
Not Yet Assigned

Art Unit  
Not Yet Assigned

Invention Title  
**OLEDs HAVING N-TYPE DOPING**

Inventor(s)  
THOMPSON et al.

Address to:  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on

Date: 3/12/04

Signature: Thomas F. Meagher  
Thomas F. Meagher (Reg. No. 29,831)

1. In accordance with the duty of disclosure under 37 C.F.R. § 1.56 and in conformance with the procedures of 37 C.F.R. §§ 1.97 and 1.98 and M.P.E.P. § 609, attorneys for Applicants hereby bring the following references to the attention of the Examiner. The references are listed on the attached modified PTO Form No. 1449. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.
2. A copy of each patent, publication or other information listed on the modified PTO form 1449 is enclosed, unless otherwise indicated.
3. It is believed that no fees are due in connection with this Information Disclosure Statement. However, should any fees be due, the Commissioner is authorized to charge Deposit Account No. 11-0600 for such fees. A duplicate copy of this communication is enclosed for charging purposes.

Dated: 3/12/04

By:

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**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT  
PTO-1449**

DOCKET NO.  
10020/30901

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GROUP  
Not Yet Assigned

**U. S. PATENT DOCUMENTS**

EXAMINER INITIAL	PATENT/PUBLICATION NUMBER	PATENT/PUBLICATION DATE	NAME	CLASS	SUBCLASS	FILING DATE
	4,769,292	September 6, 1988	Tang et al.			
	5,844,363	December 1, 1998	Gu et al.			
	5,707,745	January 13, 1998	Forrest et al.			
	5,703,436	December 30, 1997	Forrest et al.			
	6,303,238	October 16, 2001	Thompson et al.			
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	6,097,147	August 1, 2000	Baldo et al.			
	5,247,190	September 21, 1993	Friend et al.			
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	6,337,102	January 8, 2002	Forrest et al.			
	6,294,398	September 25, 2001	Kim et al.			
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	6,310,360	October 30, 2001	Forrest et al.			
	2002-0034656	March 21, 2002	Thompson et al.			
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	2003/0230980	December 18, 2003	Forrest et al.			
	2003-0072964	April 17, 2003	Kwong et al.			

**FOREIGN PATENT DOCUMENTS**

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO
	WO 02/074015	September 19, 2002	PCT				

**OTHER DOCUMENTS**

EXAMINER INITIAL	AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.
	PARTHASARATHY et al., "Lithium doping of semiconducting organic charge transport materials," J. Appl. Phys. (2001), 89(9), 4986-4992
	ZHOU et al., "Low-voltage inverted transparent vacuum deposited organic light-emitting diodes using electrical doping," Appl. Phys. Lett. (2002) 81(5), 922-924
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	JOHANSSON et al., "Electronic Structure of tris(8-hydroxyquinoline) aluminum thin films in the pristine and reduced states," J. Chem. Phys. (1999), 111(5), 2157-2163
	KIDO et al., "Bright organic Electroluminescent devices having a metal-doped electron-injecting layer," Appl. Phys. Lett. (1998), 73(20), 2866-2868
	WU et al., "Improved efficiency of organic light-emitting devices employing bathocuproine doped in the electron-transporting layer," Semicond. Sci. Technol. (2003), 18 L49-L52
	CHOONG et al., Appl. Phys. Lett. (1998), 72(21), 2689-2691
	Baldo et al., "Highly efficient phosphorescent emission from organic Electroluminescent devices," Nature, vol. 395, 151-154 (1998)
	Baldo et al., "Very high-efficiency green organic light-emitting devices based on electrophosphorescence," Appl. Phys. Lett., vol. 75, No. 3, 4-6 (1999)
	Adachi et al., "Nearly 100% internal phosphorescent efficiency in an organic light emitting device," J. Appl. Phys., 90, 5048 (2001)
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EXAMINER INITIAL		AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.
		Lu et al., U.S. Patent Application Serial No. 09/931,948, filed August 20, 2001, entitled "Transparent Electrodes".
		Shtein et al., U.S. Patent Application Serial No. 10/233,470, filed September 4, 2002, entitled "Process and Apparatus for Organic Vapor Jet Deposition".

EXAMINER	DATE CONSIDERED
EXAMINER: Initial if citation considered, whether or not citation is in conformance with M.P.E.P. 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	